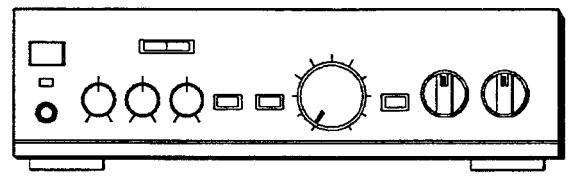
S/M Code No.90 – 108 DATE OF ISSUE 10/199

AIWA®

XA-006

SERVICE MANUAL



STEREO INTEGRATED AMPLIFIER

• TYPE. H,E,K,Z

SPECIFICATIONS

Common

Power requirements
XA – 006H
AC 120V/220V/240V switchable, 50/60Hz
XA – 006E,Z
AC 220V, 50Hz
XA – 006K
AC 240V, 50Hz

Power consumption
XA – 006H 140W
XA – 006E,K,Z 380W

Power amplifier

Effective output power
75W + 75W
(4 ohms, T.H.D. 0.9%, 1kHz)
56W + 56W
(8 ohms, T.H.D. 0.9%, 1kHz)

Total harmonic distortion
0.018%
(20Hz – 20kHz, 40W, 8 ohms)

Output bandwidth
6Hz – 50kHz
(less than 0.05%)
[Both channels driven, 8 ohms]

Frequency response
5Hz – 80kHz
(+0.5/–3dB)

Preamplifier

S/N ratio — IHF A curve short circuited
PHONO (MM) 89dB
(5mV input)
TUNER,CD,VCR/AUX,TAPE/DAT 107dB

Input jacks
(Sensitivity/input impedance)
PHONO (MM) 2.5mV/47k ohms
TUNER,CD,VCR/AUX,TAPE/DAT 150mV/47k ohms

PHONO overload level
85mV (MM)
[1kHz, T.H.D. 0.01%]

Output jacks
(Level/output impedance)
TAPE/DAT 150mV/47k ohms
Headphones 8 – 32 ohms
Speakers 4 – 16 ohms
(A + B : 8 – 16 ohms)

RIAA deviation
± 0.5dB (30Hz – 15kHz)

Maximum dimensions
430 (W) x128 (H) x332 (D) mm

Weight — 7.6kg

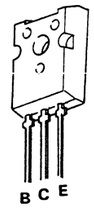
• Design and specifications are subject to change without notice.

AIWA Co., Ltd.

Tokyo Japan

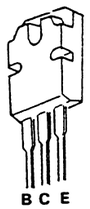
Printed in Japan

REF.NO.	PART NO.	DESCRIPTION
C143	★87-010-260-019	CAP,ELECT 47-25 SME
C144	★87-010-260-019	CAP,ELECT 47-25 SME
S3	80-AA1-635-010	PUSH SW(LOUDNESS)
S4	80-AA1-636-010	PUSH SW(DIRECT)
S5	80-AA1-635-010	PUSH SW(MUTING)
VR1	80-AA1-630-010	VOLUME,100KB(VOLUME)
VR2	80-AA1-631-010	VOLUME,100K(BALANCE)
VR3	80-AA1-632-010	VOLUME,50KC(BASS)
VR4	80-AA1-632-010	VOLUME,50KC(TREBLE)
		═══ POWER-1 CIRCUIT BOARD SECTION ═══
⚠	★87-033-213-019	CLAMP FUSE(H MODEL)
⚠ F3	87-035-190-019	FUSE,T2A(H MODEL)
⚠ F4	87-035-190-019	FUSE,T2A(H MODEL)
		═══ POWER-2 CIRCUIT BOARD SECTION ═══
⚠	★87-033-213-019	CLAMP FUSE
⚠ F1	87-035-194-019	FUSE,6.3AT(H MODEL)
⚠ F1	87-035-370-010	FUSE,6.3A-250V(EXCEPT H MODEL)
⚠ F2	87-035-194-019	FUSE,6.3AT(H MODEL)
⚠ F2	87-035-370-010	FUSE,6.3A-250V(EXCEPT H MODEL)
		═══ POWER SW CIRCUIT BOARD SECTION ═══
⚠ C111	★87-019-112-019	SPARK KILLER 0.01E
J5	87-009-043-010	JACK,6.3(PHONES)
⚠ S8	87-036-210-010	PUSH SW(POWER)
		═══ LED CIRCUIT BOARD SECTION ═══
LED1	87-001-779-019	LED,SLH-56VC 70F165(POWER)
		═══ AC VOLTAGE SW CIRCUIT BOARD SECTION(H MODEL) ═══
⚠ S9	87-036-067-010	SLIDE SW(AC VOLTAGE)
		═══ MISCELLANEOUS ═══
⚠	★87-034-749-019	AC CORD(H)(HJ MODEL ONLY)
⚠	★87-085-184-010	BUSHING,AC CORD D(HJ MODEL ONLY)
⚠	★87-085-185-010	BUSHING,AC CORD E(H,E,K,Z MODELS)
⚠	★82-187-797-010	AC CORD(E)(H MODEL ONLY)
⚠	★87-034-592-010	AC CORD(BS)(K MODEL ONLY)
⚠	★87-034-781-010	AC CORD ASSY(E)(E,Z MODELS)
⚠ PT1	80-AA1-606-019	POWER TRANSFORMER H(H,HJ MODELS)
⚠ PT1	80-AA1-608-010	POWER TRANSFORMER E(E,Z MODELS)
⚠ PT1	80-AA1-609-010	POWER TRANSFORMER K(K MODEL)



2SC3419

2SA1015
2SC2240
RN1207



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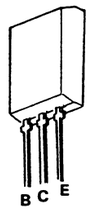
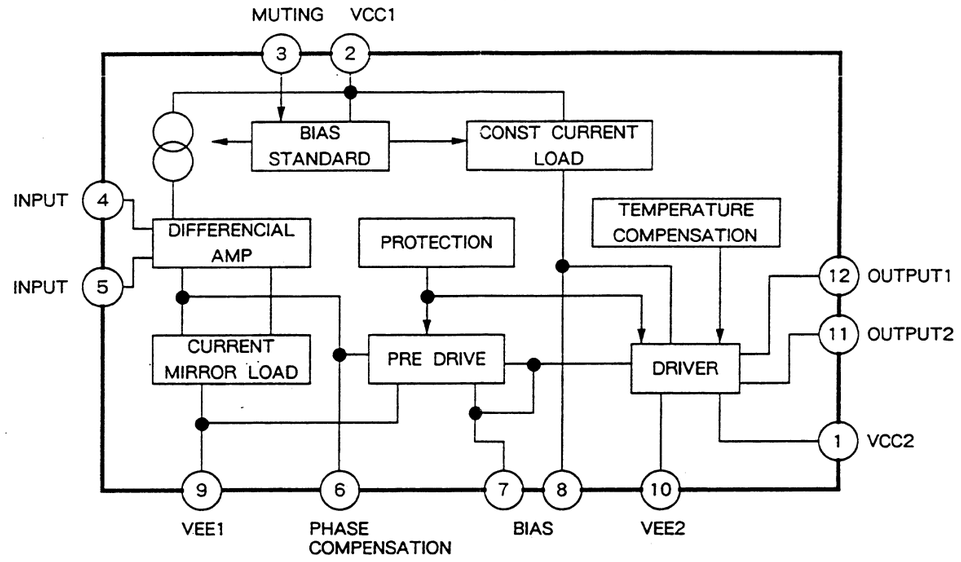


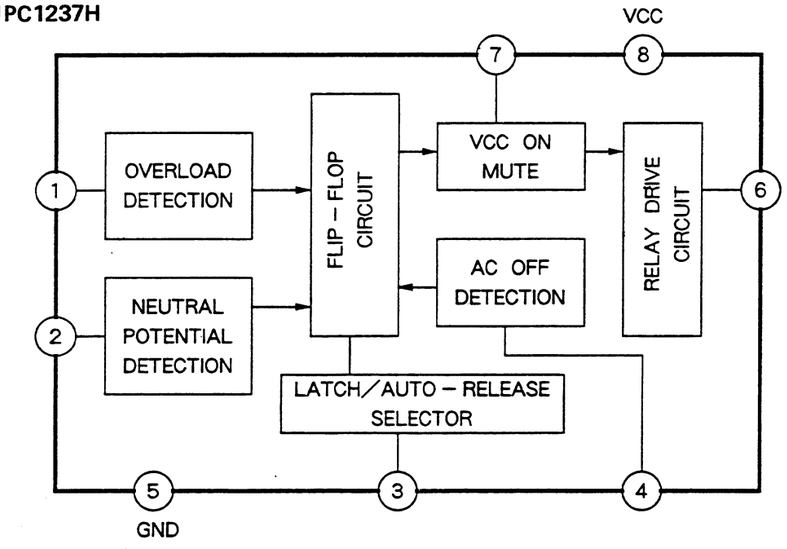
2SB1330
2SD2006

IC BLOCK DIAGRAM

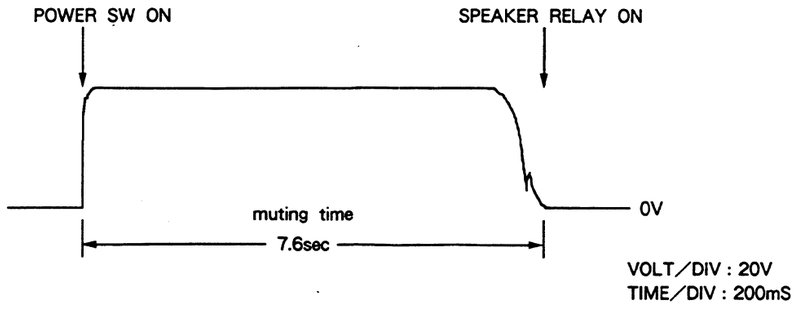
IC ,UPC1225H

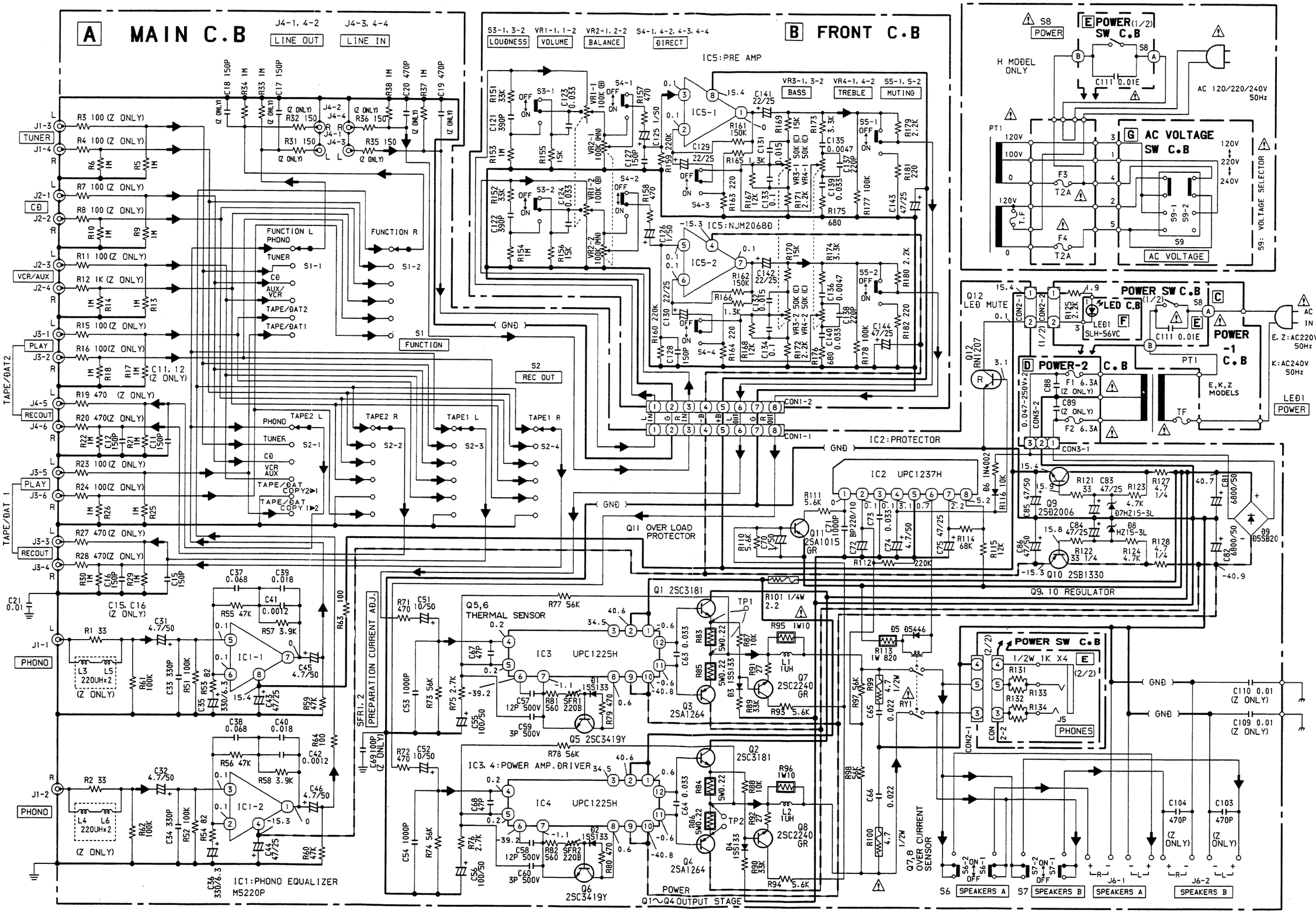


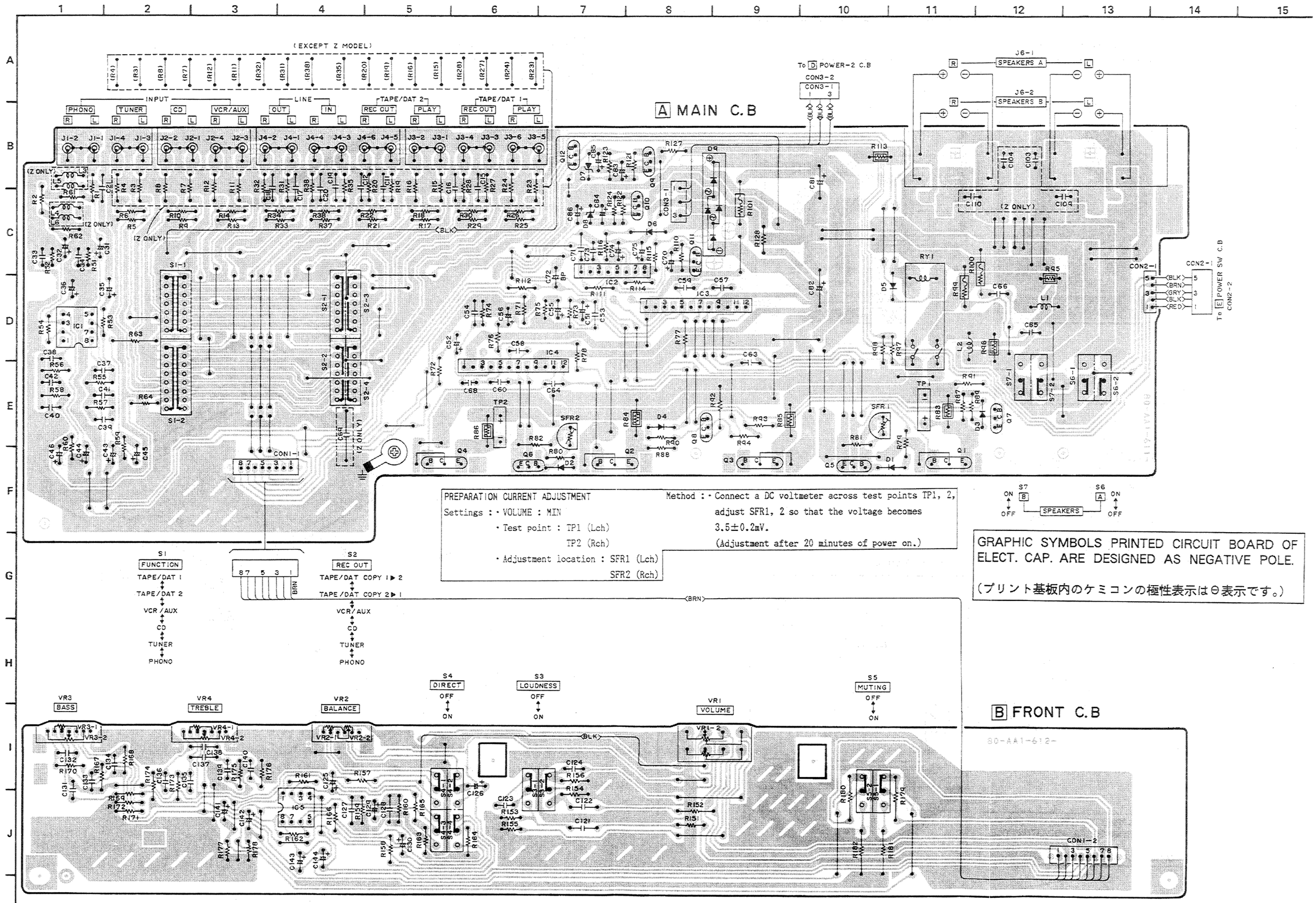
IC ,UPC1237H

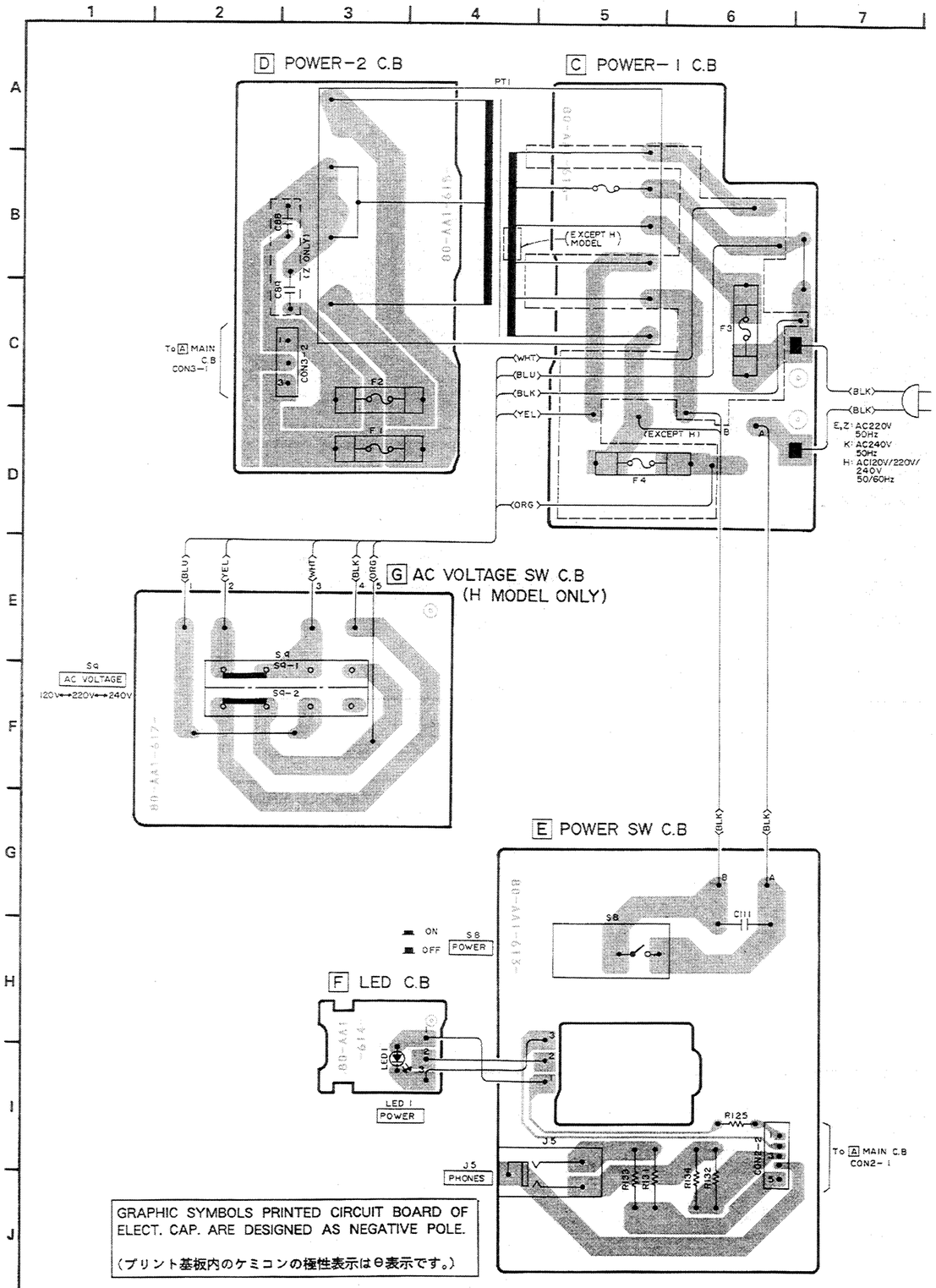


IC2 UPC1237H PIN⑦VOLTAGE WAVE FORM




A MAIN C.B
J4-1, 4-2 LINE OUT
J4-3, 4-4 LINE IN
B FRONT C.B
S3-1, 3-2 LOUDNESS
VR1-1, 1-2 VOLUME
VR2-1, 2-2 BALANCE
S4-1, 4-2, 4-3, 4-4 DIRECT
IC5:PRE AMP
VR3-1, 3-2 BASS
VR4-1, 4-2 TREBLE
S5-1, 5-2 MUTING
IC5-1
IC5-2
IC5:NJM2068D
TUNER
CD
TAPE/DAT
PLAY
RECOUT
PHONO
FUNCTION L
FUNCTION R
S1 FUNCTION
S2 REC OUT
TAPE2 L
TAPE2 R
TAPE1 L
TAPE1 R
GND
CON1-2
CON1-1
IC2:PROTECTOR
IC2 UPC1237H
Q11 OVER LOAD PROTECTOR
Q11 2SA1015 GR
Q9, 10 REGULATOR
Q9 2SD2006
Q10 2SB1330
D7HZ15-3L
D8 HZ15-3L
D9 D55B20
Q1 2SC3181
Q2 2SC3181
Q3 2SA1264
Q4 2SA1264
Q5 2SC3419Y
Q6 2SC3419Y
Q7 2SC2240 GR
Q8 2SC2240 GR
Q5,6 THERMAL SENSOR
IC3 UPC1225H
IC4 UPC1225H
IC3, 4:POWER AMP. DRIVER
POWER Q1~Q4 OUTPUT STAGE
IC1:PHONO EQUALIZER M5220P
PREPARATION CURRENT ADJ.
Q12 LED MUTE
Q12 RN1207
Q7,8 OVER CURRENT SENSOR
RY1
S6 SPEAKERS A
S7 SPEAKERS B
J6-1 SPEAKERS A
J6-2 SPEAKERS B
J5 PHONES
S8 POWER
E POWER(1/2) SW C.B
H MODEL ONLY
AC 120/220/240V 50Hz
G AC VOLTAGE SW C.B
S9: VOLTAGE SELECTOR
POWER SW C.B (1/2)
LED C.B
LED1 SLH-56VC
POWER -1 C.B
D POWER-2 C.B
E,K,Z MODELS
AC IN
E. Z:AC220V 50Hz
K:AC240V 50Hz
LED1 POWER
POWER SW C.B (2/2)
1/2W 1K X4
PT1
T.F
TF


(EXCEPT Z MODEL)
INPUT
PHONO
TUNER
CD
VCR/AUX
LINE
OUT
IN
TAPE/DAT 2
REC OUT
PLAY
TAPE/DAT 1
REC OUT
PLAY
(Z ONLY)
A MAIN C.B
To D POWER-2 C.B
CON3-2
CON3-1
J6-1
SPEAKERS A
J6-2
SPEAKERS B
CON2
CON2-1
To E POWER SW C.B
CON2-2
S1
FUNCTION
TAPE/DAT 1
TAPE/DAT 2
VCR/AUX
CD
TUNER
PHONO
S2
REC OUT
TAPE/DAT COPY 1▶2
TAPE/DAT COPY 2▶1
VCR/AUX
CD
TUNER
PHONO
S4
DIRECT
OFF
ON
S3
LOUDNESS
OFF
ON
S5
MUTING
OFF
ON
VR3
BASS
VR4
TREBLE
VR2
BALANCE
VR1
VOLUME
B FRONT C.B
S7
S6
ON
OFF
SPEAKERS
PREPARATION CURRENT ADJUSTMENT
Settings : · VOLUME : MIN
· Test point : TP1 (Lch)
TP2 (Rch)
· Adjustment location : SFR1 (Lch)
SFR2 (Rch)
Method : · Connect a DC voltmeter across test points TP1, 2, adjust SFR1, 2 so that the voltage becomes 3.5±0.2mV.
(Adjustment after 20 minutes of power on.)
GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.
(プリント基板内のケミコンの極性表示は⊖表示です。)

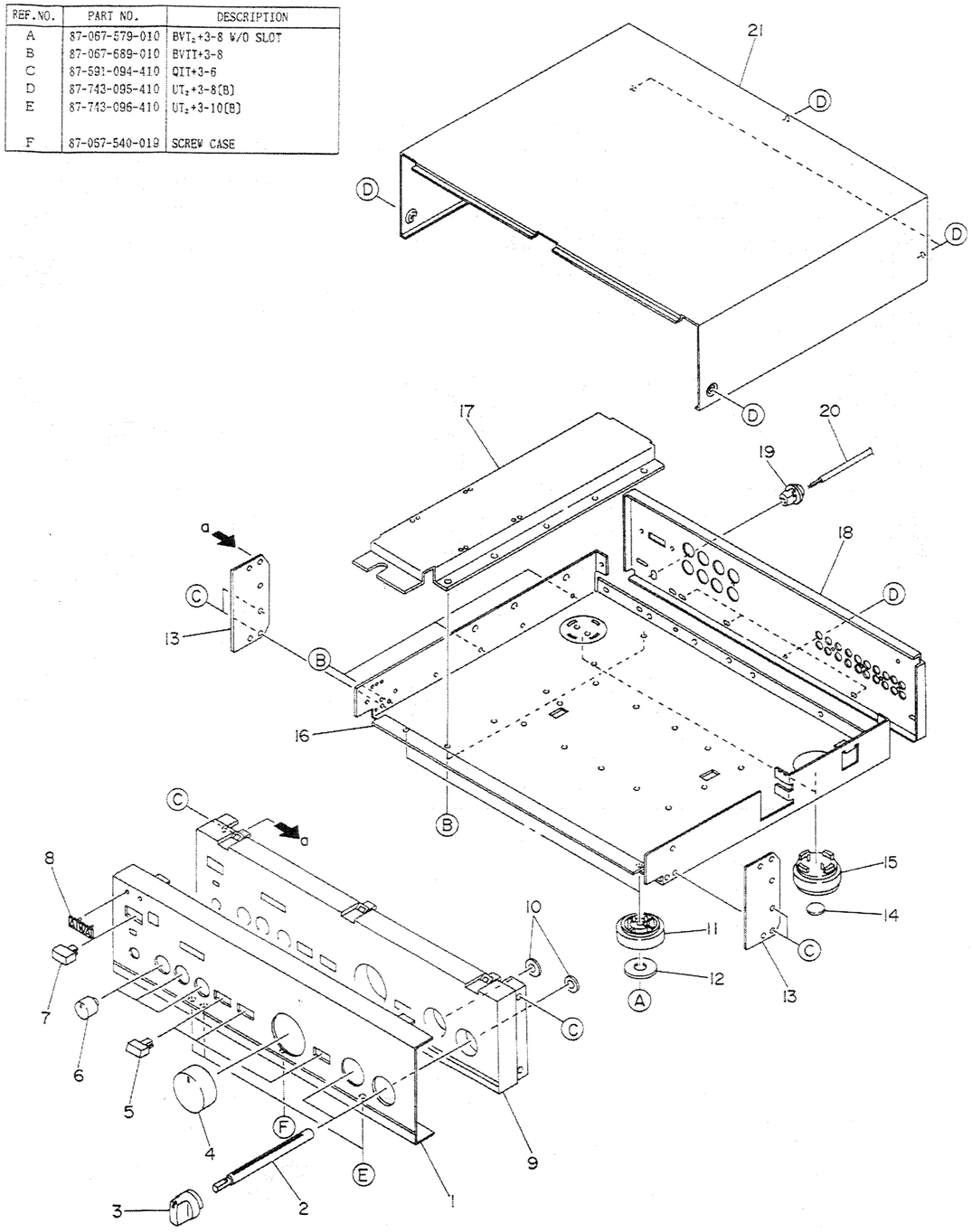


GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

〈プリント基板内のケミコンの極性表示はθ表示です。〉

EXPLODED VIEW – 1

REF.NO.	PART NO.	DESCRIPTION
A	87-067-579-010	BVT_2+3-8 W/O SLOT
B	87-067-689-010	BVTT+3-8
C	87-591-094-410	QTT+3-6
D	87-743-095-410	UT_2+3-8[B]
E	87-743-096-410	UT_2+3-10[B]
F	87-057-540-019	SCREW CASE

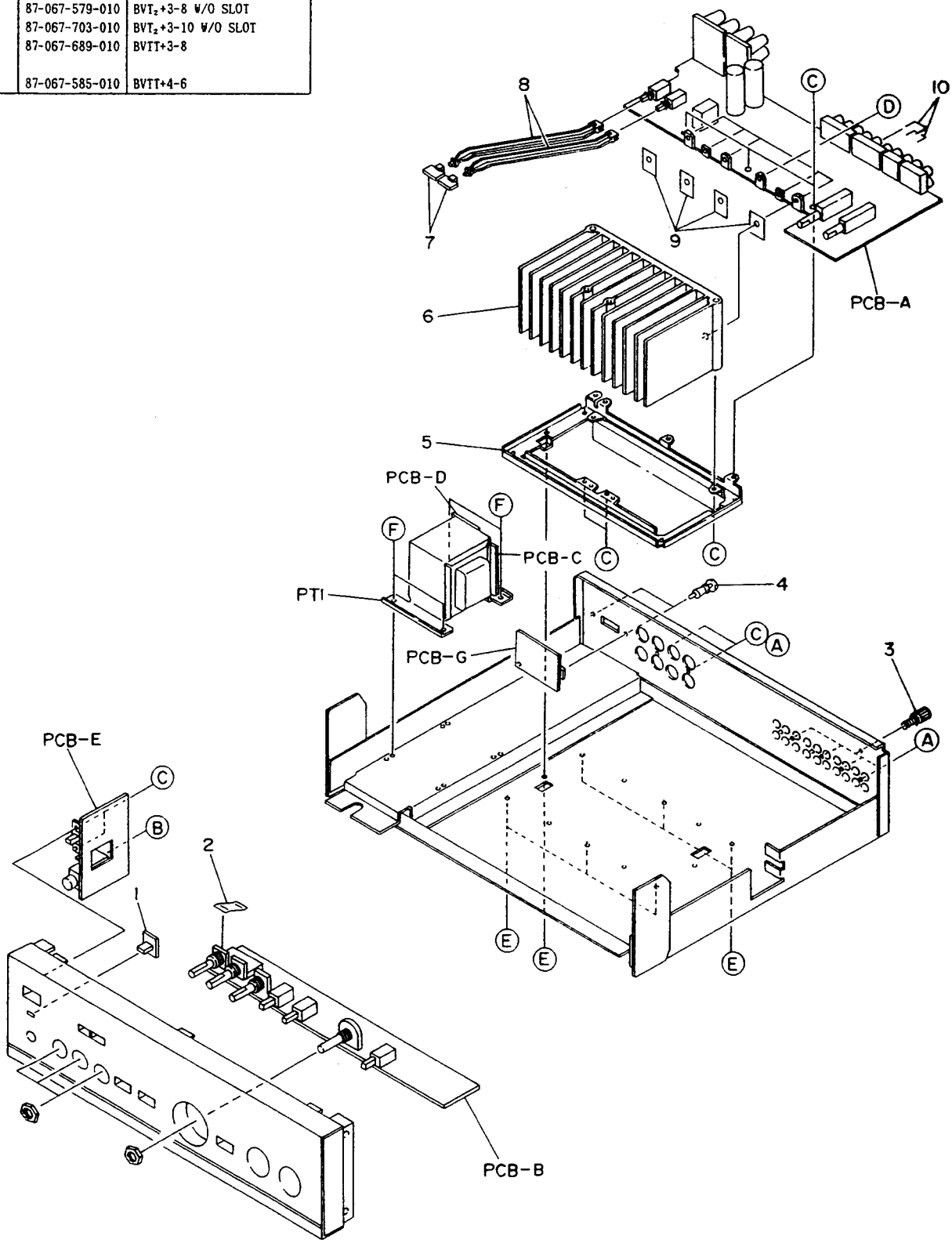


MECHANICAL PARTS LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q, TY
	1-1	*80-AA1-002-010	PANEL,FR	*	1
	1-2	*80-AA1-205-010	ROD,SEL	*	2
	1-3	*80-AA1-007-019	KNOB,SEL	*	2
	1-4	*80-AA1-005-010	KNOB,VOLUME	*	1
	1-5	*80-AA1-008-019	BUTTON,MUTE	*	3
	1-6	*80-AA1-006-019	KNOB,BALANCE	*	3
	1-7	*84-721-023-010	BUTTON,POWER		1
	1-8	*84-764-009-119	BADGE,AIWA		1
	1-9	*80-AA1-001-010	CABINET,FR	*	1
	1-10	*81-663-213-019	CLOTH,DIA 18-8.7		2
	1-11	*84-738-022-010	FOOT		2
	1-12	*84-731-027-010	FELT,FOOT		2
	1-13	---	HOLDER,SIDE		2
	1-14	*80-DS3-206-019	G CUSHION,DIA 15-1		2
	1-15	80-DS3-014-119	FOOT,REAR ST		2
	1-16	---	CHASSIS,MAIN		1
	1-17	---	HOLDER,PT		1
	1-18	*80-AA1-004-019	PANEL,REAR(H)	*	1
	1-18	*80-AA1-012-019	PANEL,REAR(HJ)	*	1
	1-18	*80-AA1-009-019	PANEL,REAR(E)	*	1
	1-18	*80-AA1-010-019	PANEL,REAR(K)	*	1
	1-18	*80-AA1-011-119	PANEL,REAR(Z)	*	1
	1-19	87-085-184-010	BUSHING,AC CORD (HJ)		1
	1-19	87-085-185-010	BUSHING,AC CORD (H,E,K,Z)		1
	1-20	*82-187-797-019	AC CORD (H)		1
	1-20	*87-034-749-019	AC CORD (HJ)		1
	1-20	*87-034-781-018	AC CORD (E,Z)		1
	1-20	*87-034-592-018	AC CORD (K)		1
	1-21	*80-AA1-004-019	CABINET,STEEL	*	1

EXPLODED VIEW – 2

REF.NO.	PART NO.	DESCRIPTION
A	87-743-095-410	UT_2+3-8 W/O SLOT(B)
B	87-661-096-410	VFT_1+3-10
C	87-067-579-010	BVT_2+3-8 W/O SLOT
D	87-067-703-010	BVT_2+3-10 W/O SLOT
E	87-067-689-010	BVTT+3-8
F	87-067-585-010	BVTT+4-6



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q, TY
	2-1	★89-AA1-022-019	GUIDE,LIGHT MUTE		1
	2-2	80-AA1-618-010	SHEET,SHIELD 20-17-0.08	*	1
	2-3	---	TERMINAL,EARTH		1
	2-4	★87-084-063-019	RIVET,NYLON 3-5.5(H)		2
	2-5	---	HOLDER,HEAT-SINK		1
	2-6	---	HEAT-SINK,MAIN		1
	2-7	★80-MK4-024-019	BUTTON,TAPE		2
	2-8	★80-AA1-204-019	ROD,SPEAKER	*	2
	2-9	89-AA1-602-010	SHEET,T03PL MICA		4
	2-10	★87-009-389-010	JACK PIN SHORT-14		2

■ ACCESSORIES/PACKAGE LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q,TY
	1	★80-AA1-901-010	INSTRUCTION BOOKLET, H (H)	※	1
	2	★80-AA1-902-010	INSTRUCTION BOOKLET, EKZ (E,K,Z)	※	1
	3	★87-042-062-010	PLUG ADAPTOR S-16115 (H)		1